

Ensemble® III Speaker System

by Henry Kloss

Installation and Operating Instructions



Ensemble III

Speaker System

by Henry Kloss

Contents

Important—Please Read First
Unpacking The System
<i>Part One: Installation</i>
Speaker Placement
Hookup Alternatives
Preparing Speaker Wires
Making Connections
<i>Part Two: Operation</i>
Optimizing The Sound Of Your System
About Amplifier Power
Finalizing Your Installation
7-Year Limited Warranty
Difficulty?

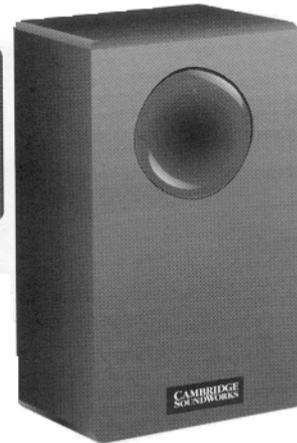
Unpacking The System

As you unpack *Ensemble III*, please examine each speaker unit carefully for signs of shipping damage. If there is any damage, *do not discard the shipping carton, and do not install or use the system*. Consult the store where you purchased the system or call Cambridge SoundWorks at 1-800-FOR-HIFI for assistance. It's a good idea to save the shipping carton and its inserts in case you have to ship your system.

All the items shown to the right should be included; inform your store or Cambridge SoundWorks if anything is missing.



Satellite feet
(2 strips of 4)



Subwoofer

Speaker Placement

Using the guidelines that follow, first decide where to place *Ensemble III*'s speaker units in your listening room and which of several hookup alternatives is best. Then prepare speaker wires and make the connections. Once the system is working, listen extensively and experiment further with placement *before* making the installation permanent.

The satellites

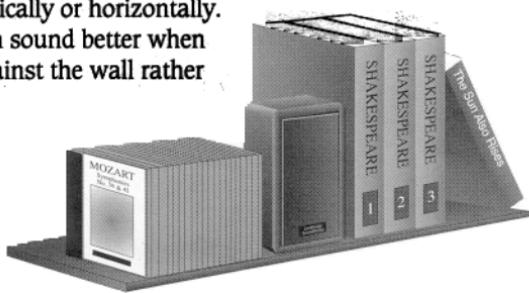
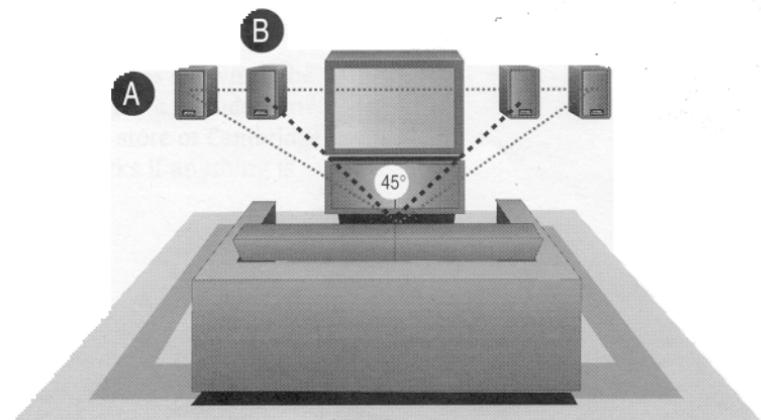
• For music listening, try to place the satellites to form an equal-sided triangle with your favorite listening position (A, below). Because the room's surfaces tend to integrate the sound before it reaches you, perfectly symmetrical placement is not necessary.

- In a home theater installation, try to place the satellites so that they form a 45° angle with your preferred seat (B), which best takes advantage of how movie soundtracks are mixed. The satellites are magnetically shielded, so they can be placed close to the TV. The subwoofer is *not* magnetically shielded, however, and must be at least 18 inches from the set to prevent picture distortion.

- Have a clear line of sight to the satellites, so that higher frequencies are not blocked.
- The satellites can be placed either vertically or horizontally. They often sound better when placed against the wall rather

than out from it, but don't hesitate to try both ways.

- If the satellites are across the room from the listening area, their height is usually not critical; they can be placed eye level on the wall, up near the ceiling, or most anywhere in between. If they are close to the listening area, however, it is best to have them at or near ear level.
- If you put the satellites in bookshelves or a wall system, place them with their front surfaces flush with the front of the shelves; you can then surround



them with books, CDs, tapes, etc., as shown.

- Take advantage of the satellites' small size and consider locations where regular speakers wouldn't fit, such as window sills or a mantelpiece.
- The satellites can also be wall mounted as described on page 12. Don't mount them permanently right away, however; put them on small tables, chairs, or even stacks of books so you can evaluate how they sound first.

The subwoofer

- Because the ear cannot localize low-bass, *Ensemble III*'s subwoofer does not contribute significantly to the stereo effect. Therefore it need not be particularly close to the satellites, and can be hidden under or behind furniture. Low-bass will appear to emanate from the satellites.

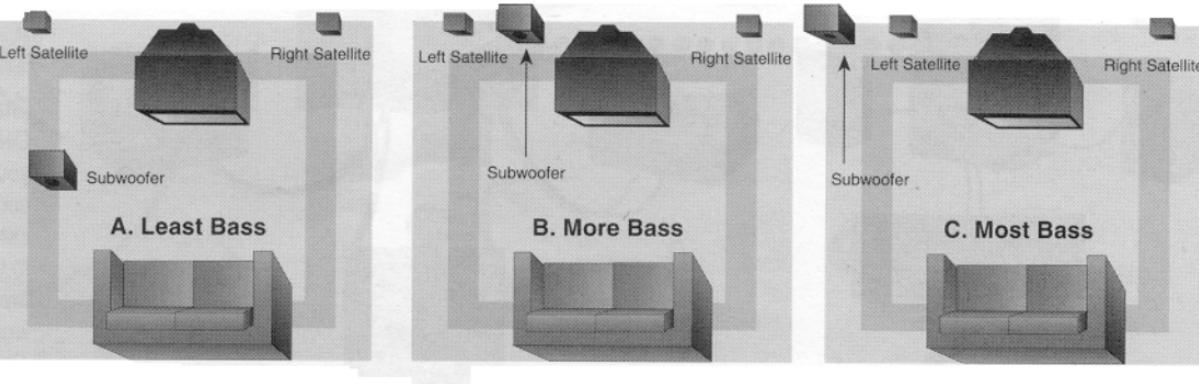
- To start with, simply place the subwoofer on the floor against the wall nearest the satellites. After some preliminary listening you can experiment further using the guidelines which follow.
- The bass port—the hole on one side of the cabinet—must be at least 2 inches from the nearest surface.
- The relative strength of low-bass depends on how close the

subwoofer is to intersecting room surfaces as shown below. The most bass—possibly *too* much in some cases—results with the unit in a corner on the floor or up near the ceiling. The least bass results with the unit out in the room away from the corners, walls, and ceiling.

- While we usually don't recommend placing the subwoofer behind the listening area, try it

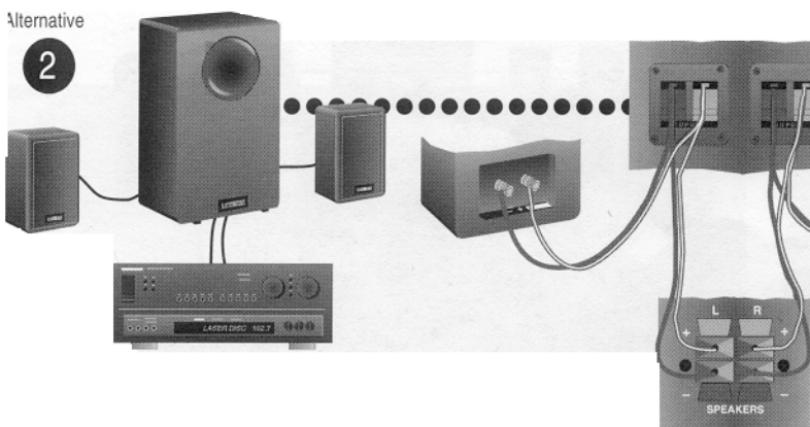
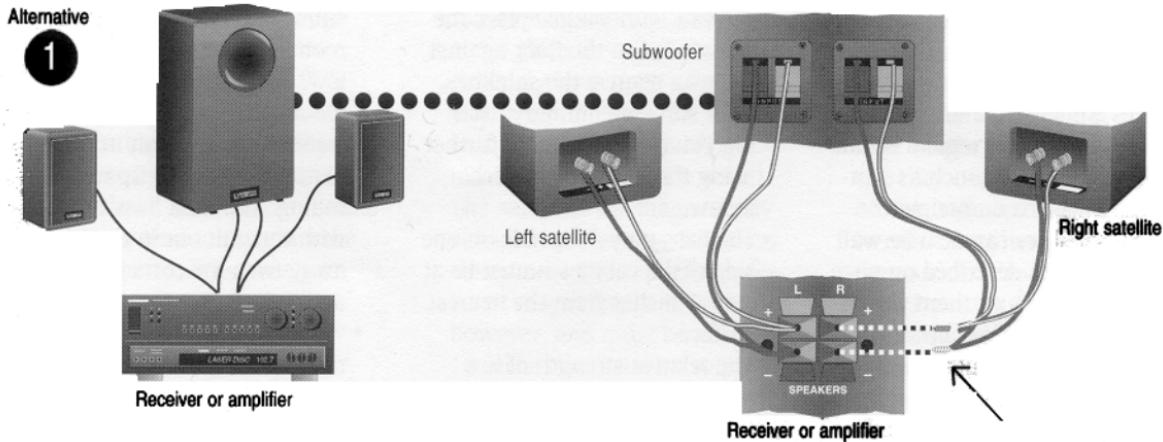
if you're tight for space.

- Don't place the subwoofer on the same shelf system as a turntable. Strong bass notes from the speaker could be picked up by the turntable, fed back out the speaker again, picked up by the turntable yet again, and so on. This condition, known as acoustic feedback, will at least muddy the bass, and at worst set up a loud, low-frequency rumbling.



Hookup Alternatives

Choose one of these three configurations for connecting *Ensemble III* to your receiver or amplifier. While the wiring configurations provide identical performance, running wires independently to each speaker unit (1, right) makes it much easier to experiment with speaker placement. You can change to one of the other configurations later if you wish.

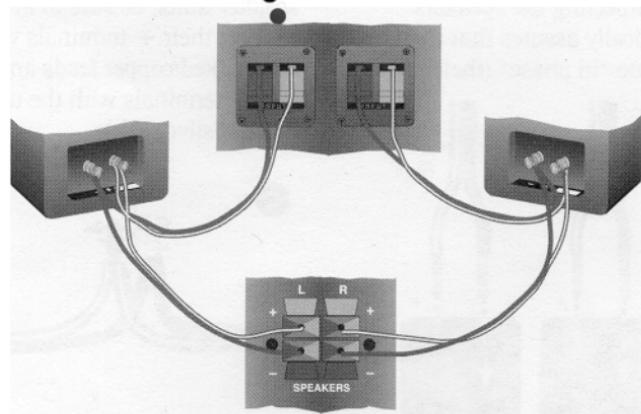
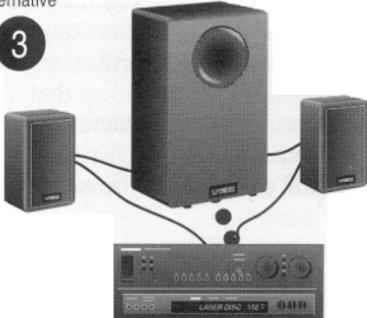


IMPORTANT NOTE

The complete *Ensemble III* must be connected ONLY to the Speaker A or Speaker B terminals on your receiver or amplifier, just like a pair of conventional speakers. Do NOT connect the satellites to one set of terminals and the subwoofer to the other. With many units, this would connect the satellites and bass speaker in series, which would do no damage, but could seriously degrade *Ensemble III*'s performance.

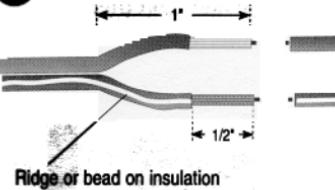
Preparing Speaker Wires

Alternative



1. After choosing the connection configuration, cut speaker wire into four appropriate lengths. We recommend you use a wire cutter/stripper.
2. Separate the two individual leads for a distance of one inch (as shown in A, below) at both ends of each of the four wires.
3. Strip $\frac{1}{2}$ inch of insulation from each individual lead end, being careful to apply only enough pressure to cut through the insulation and not the wire strands.
4. Twist the bared wire strands tightly together (B). Be sure that there are no loose strands that could short across the connecting terminals on the speakers or receiver (C).

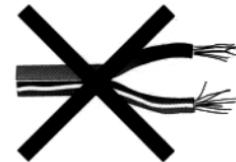
A



B



C

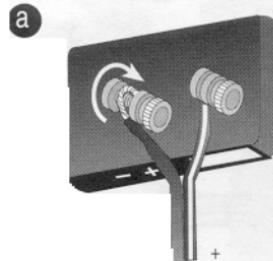


Making Connections

- The leads in each pair are usually differentiated by a ridge or color stripe down one lead's insulation, and/or through the use of different color wire (copper and silver). This is important when making connections as described in the next section.
- Use at least 18-gauge wire for runs of up to 50 feet, and at least 16-gauge for longer runs.

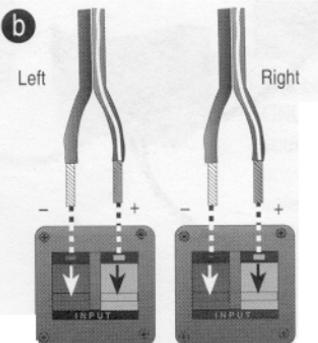
When connecting your system, follow these guidelines:

- To connect the satellites, turn their + and - connectors counterclockwise to expose their shafts, wrap the stripped ends of the wires around the shafts, and then tighten the connectors back down clockwise (**a**, below).
- To connect the subwoofer, slide the tabs on its spring-loaded connectors, insert the bared wires into the holes that are revealed, and then release the connectors (**b**).



- Connect all the speaker units identically as shown. Connect the red (+) and black (-) terminals on the speaker units to their red and black counterparts on your receiver or amplifier as shown in the system diagrams on the previous page. Use the marked/copper leads for interconnecting the red terminals, and the unmarked leads for the black terminals.

Connecting the speakers identically assures that they operate "in phase" (their cones



move in and out together). "Out of phase" connections can muddy the stereo effect, and sounds like solo voices that should appear to come from a point between the two satellites will sound "split" between them.

- Where necessary, twist satellite and subwoofer marked/copper and unmarked/silver leads together as shown in **c**, below.
- When running cables between speaker units, be sure to interconnect their + terminals with the marked/copper leads and their - terminals with the unmarked/silver leads.



Optimizing The Sound Of Your System

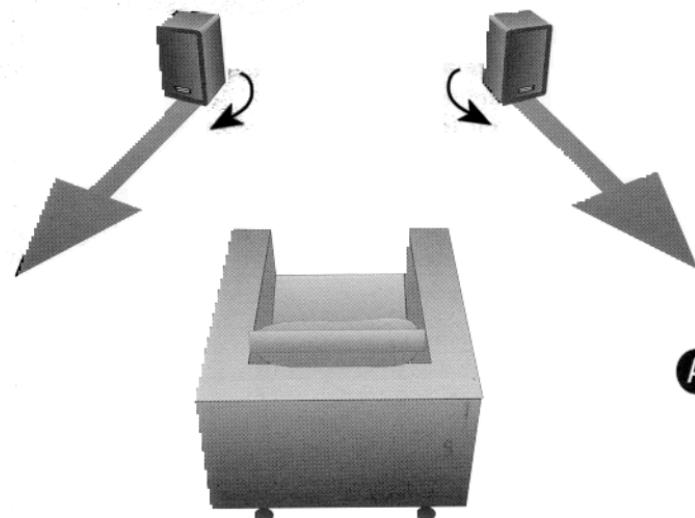
It is almost impossible to find an acoustically ideal placement for a conventional speaker in the listening room. This is because room acoustics affect the low-bass frequencies differently from the rest of the range. If you place the speaker so that the room helps the bass, it is likely to hinder the upper ranges (and vice-versa). Thus placing conventional speakers almost inevitably entails a compromise, even before proper stereo effect, decor, and convenience are taken into account.

The usual restrictions don't apply to *Ensemble III* because it separates the low-bass out from the rest of the range. This means that you can place the subwoofer and the satellites differently to take advantage of the room in both the lower and upper ranges. Yet the units are so compact that even when placed optimally, they have little or no visual impact on your living space.

We urge you to take full advantage of *Ensemble III* by trying the speaker units in different locations within your listening room. Of course, if the system sounds satisfactory from the moment you connect it and first turn it on, you may wish to go no further. But if you have any doubts or simply wish to see if an improvement can be made, we suggest you experiment with placement using the following guidelines:

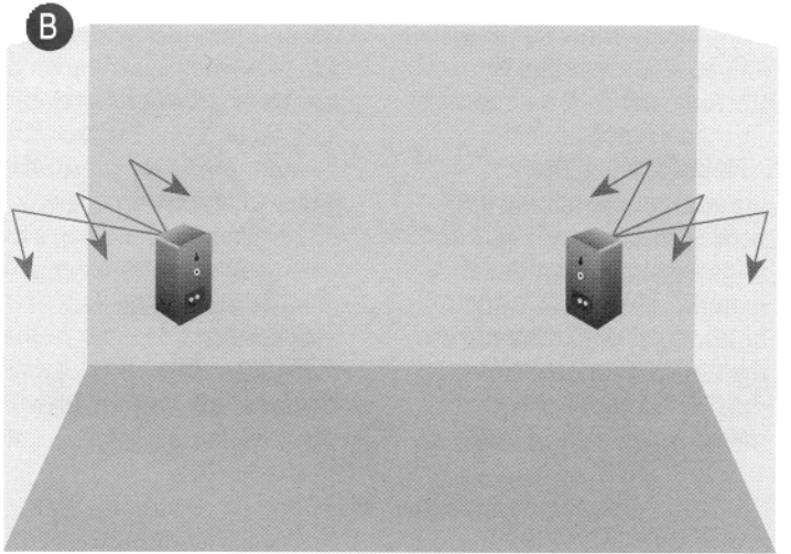
- Let your ears be your guide, and trust them. When *Ensemble III* sounds right to you, you've found the best placement.
- A relatively small change in placement can have a relatively large effect on the sound. For example, low-bass increases as you move the subwoofer closer to the intersecting room surfaces. The sound is apparently brighter with the satellites close to the listening area than with

them across the room. And the apparent fullness of the sound, a function of mid-bass rather than low-bass, is greater with the satellites against a wall than with them out in the room.



This is not to imply that "more is better," whether it be bass, brightness, or fullness. The point is that a *change* can be easily effected simply by moving one or more of the speaker units. And with *Ensemble III*, that is easy to do.

- Program material varies *greatly*, so be sure to listen to a variety of recordings to prevent being misled by the particular characteristics of a particular recording.
- If it is necessary to place the satellites close to the listening area and you find the sound too bright, try placing the units at an angle so that listeners aren't directly on their axis (A). In a small room, you might even try aiming the satellites away from the listeners altogether into the corners of the room, to scatter the highs for a more spacious sound (B).
- The subjective "fullness" of the sound is not so much a function of the low-bass as it is of the mid-bass. Similarly, the subjective "openness" of the sound is not so much a function of the high treble as it is of the *lower mid-range*. Both of these critical ranges are reproduced by the satellite units, and so are affected by their placement. Mid-bass and mid-range balance is usually best with the satellites against a wall. If they are out from the wall and sound too thin, particularly on vocal recordings, try moving them back against the wall. Conversely, if they are against the wall and sound too heavy or boomy, particularly on male voices, move them out from the wall.
- The subwoofer reproduces only the *lowest* bass, such as bass drum, organ pedals, and the lowest notes of string basses and synthesizers. The strength of these sounds, some of which are more felt than heard, is markedly affected by the position of the subwoofer. Refer to the illustration on page 5 for guidance if the low-bass is either too strong or not strong enough. Also, not all recordings have truly low-bass on them, so be sure to make judgments on recordings which do.
- If you're not happy with what you hear and are having trouble improving it, check with your store, or call a Cambridge SoundWorks Audio Expert at 1-800-FOR-HIFI toll-free.



About Amplifier Power

The amount of amplifier or receiver power needed to drive *Ensemble III* satisfactorily varies significantly with such factors as the size of the listening room, its acoustics and furnishings, the type of music you listen to, and how loud you like to play it. When surveying a representative variety of listeners and circumstances, we encountered power needs ranging from as little as 25 to as much as 100 watts per channel.

Ensemble III can be used safely to play music with the most powerful amplifiers and receivers designed for home listening. However, use common sense to prevent strong non-musical transients; keep the volume down when connecting or disconnecting components, raising or low-

ering your turntable's tonearm, and so on. This will help protect your ears as well as the speaker units.

If at a given volume level the sound is consistently "grainy" or "gritty", and/or there is clearly noticeable distortion on deep bass, you may be overdriving your amplifier or receiver. Back off on the volume control until the symptoms disappear. If that is not loud enough for you, you may need a more powerful amplifier or receiver for satisfactory results.

If you suspect that your amplifier or receiver is inadequate, contact your store or call a Cambridge SoundWorks Audio Expert, who will advise you on how much power would be appropriate for your particular circumstances.

Finalizing Your Installation

- The small dome-shaped feet are for the satellites. If you ever need to remove a foot, gently slide the edge of a knife under one edge and slowly *peel* it off. If you try to "pop" it off, you may damage the cabinet's finish.
- The satellites may be hung directly on a wall. Simply screw No. 10 screws into the wall so that their heads protrude about $\frac{3}{8}$ inch to fit into the keyhole slots on the back of each satellite. Plastic anchors may be needed to secure the screws in particularly hard or soft material. If so, drill $\frac{1}{4}$ inch holes in the wall, and tap the anchors into the holes until they are flush with the wall. Then screw the
- screws into the anchors until they protrude $\frac{3}{8}$ inch from the wall.
- The threaded fitting on the back of the satellites is a standard camera-tripod fitting for attaching them to speaker stands or Omnimount swivel mounts available from Cambridge SoundWorks.
- The satellites can be cleaned with a window cleaning product. Use a soft, *lint-free* cloth only. Avoid spraying the cleaner directly on the speaker grilles to prevent damage to the speaker drivers. Also, avoid getting cleaner on the serial number plate on the rear of each speaker as it may remove the numbers.
- Clean the subwoofer with a damp cloth. Do not use polish

7-Year Limited Warranty

To the original purchaser, Cambridge SoundWorks, Inc. will warrant the *Ensemble III* speaker system to be free from defects in material and workmanship for a period of seven (7) years from date of purchase. With respect to defects, Cambridge SoundWorks will, at its option, replace the product or repair the defect in the product with no charge to the original purchaser for parts or labor.

This warranty does not extend to any defect, malfunction or failure caused by misuse, abuse, accident, faulty hookup, defective associated equipment or use of the speaker with equipment for which it is not intended.

This warranty is valid only when the speaker is returned to an authorized store where it was purchased. Or, if you bought directly from Cambridge SoundWorks, call for a Return Authorization Number for the unit and return it to the address below, freight prepaid, together with a copy of the original sales slip to establish warranty status. Please do not return the *Ensemble III*, or any of its parts, to the factory without prior authorization.

This is the sole and express warranty. This warranty is in lieu of all other warranties, expressed or implied, of merchantability, fitness for purpose or otherwise. In no event shall Cambridge Sound-

Works be liable for incidental or consequential damages or have any liability with respect to defects other than the obligations set forth above.

To ensure warranty coverage it is incumbent upon the original purchaser to inform Cambridge SoundWorks or any of its authorized service agencies of the defect within the warranty period. The only acceptable method of establishing warranty status is a copy of the original proof of purchase indicating customers name and purchase date.

For warranty information contact:

Cambridge SoundWorks, Inc.
311 Needham St.
Newton, MA 02164
1-800-FOR-HIFI

Difficulty?

If you suspect there's a problem with your *Ensemble III* system, contact the store where you purchased it, or call a Cambridge SoundWorks Audio Expert who will help you track the problem, which could be in some other component in your system. If together you agree that there is something wrong with your *Ensemble III* system, you should return it to the store where you bought it. Or, if you bought directly from Cambridge SoundWorks, we will supply you with a Return Authorization Number for the unit. Please do not return the *Ensemble III* system, or any of its parts, to the factory without prior authorization.